

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
13 December 2001 (13.12.2001)

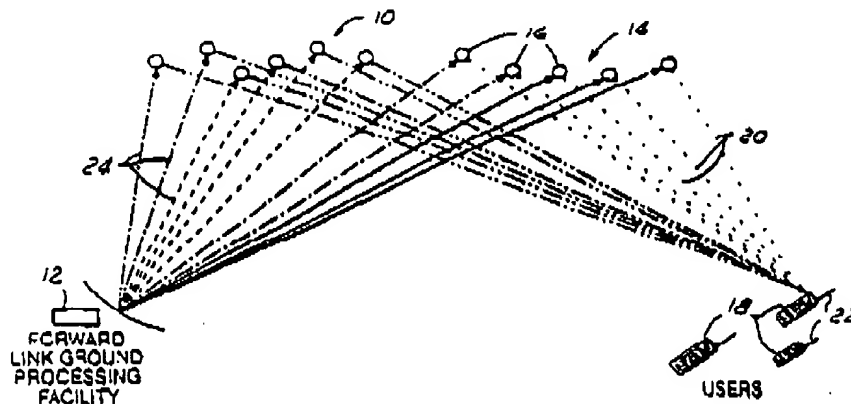
PCT

(10) International Publication Number
WO 01/94969 A2(51) International Patent Classification: **G01S 5/02**Palos Verdes Estates, CA 90274 (US). **CHANG, Donald, C., D.**; 2350 Moberly Court, Thousand Oaks, CA 91360 (US).(21) International Application Number: **PCT/US01/16988**(22) International Filing Date: **23 May 2001 (23.05.2001)**(74) Agents: **DURAI SWAMY, Vijayalakshmi, D. et al.**; Hughes Electronics Corporation, Building 001, Mail Stop A109, P.O. Box 956, El Segundo, CA 90245 (US).(25) Filing Language: **English**(26) Publication Language: **English**

(84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

(30) Priority Data: **09/587,759** **6 June 2000 (06.06.2000)** **US**

Published:

— *without international search report and to be republished upon receipt of that report*(71) Applicant: **HUGHES ELECTRONICS CORPORATION** [US/US]; 200 North Sepulveda Boulevard, El Segundo, CA 90245 (US).(72) Inventors: **YUNG, Kar, W.**; 4738 Narrot Street, Torrance, CA 90503 (US). **HAGEN, Frank, A.**; 2309 Via Rivera,*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*(54) Title: **A USER POSITIONING TECHNIQUE FOR MULTI-PLATFORM COMMUNICATION SYSTEM**

(57) Abstract: A mobile wireless communications system including a plurality of individual transponding nodes all in communication with a central processing hub. A local user signal is processed by the central processing hub and radiated through multiple paths to a plurality of the plurality of individual transponding platforms simultaneously. The signal is then re-radiated by each of the plurality of the plurality of individual transponding platforms to a mobile terminal associated with a remote user that receives the re-radiated signal from the plurality of the plurality of individual transponding platforms coherently and in phase. The number of transponders and codes used to transmit each user signal can be readily adapted to user requirements. The central hub can determine the position of each of the remote users based on stored information derived from the synchronization of the various signals, and specifically relating to the timing, phase or frequency of the signals in both the forward and return link.

WO 01/94969 A2